

REMARKS

Claim Rejections

Claims 1, 10, and 15-16 are rejected under 35 U.S.C. § 102(b) as being anticipated by Masuda (US Patent No. 6,005,180). Claims 2-3 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Masuda in view of Kiuchi et al. (US Patent No. 6,668,266). Claim 4 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Masuda in view of Ise et al. (US Patent No. 4,745,392). Claim 5 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Masuda in view of Kakihara (US Patent No. 6,314,024). Claims 6-7 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Masuda in view of Mozer et al. (US Patent No. 6,832,194). Claim 8 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Masuda in view of Smith (US Patent No. 5,701,511). Claim 9 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Masuda in view of Wei et al. (US Patent No. 6,683,817). Claims 11-14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Masuda in view of Applicant's Admitted Prior Art (AAPA).

Drawings

It is noted that the Examiner has accepted the drawings as originally filed with this application.

Claims

35 U.S.C. §102(b) Rejections Based on Masuda

In the outstanding Office Action, the Examiner rejected claim 1 under 35 U.S.C. § 102(b) as being anticipated by Masuda. Applicant respectfully traverses the rejection of claim 1 because Applicant submits that Masuda fails to teach or suggest each of the claim limitations.

Applicant submits that Masuda's disclosure is substantially different from claim 1 of the present invention in the encountered problem, the objective and the corresponding solution. Specifically, Masuda discloses a ROM 2 *external* to a CPU 1, whereas claim 1, lines 2-6 of the present invention states:

a microprocessor comprising . . . a *built-in* non-volatile program memory within the microprocessor for storing a startup program (emphasis added).

In the present invention, the encountered problem is a high cost of an external non-volatile program memory for storing an application program and a low system efficiency if the external non-volatile program memory is omitted and the application program is to be accordingly stored in a permanent memory. The present invention states, page 2, line 24 through page 3, line 6:

In . . . the prior art, the microprocessor needs an external non-volatile program memory to store the specific application program. . . . The unit cost (dollars/byte) of the [external] non-volatile program memory is higher than the permanent memory. . . . If the application program is stored in the permanent memory, the time of the CPU to access the permanent memory will be longer than to access the non-volatile program memory, and the system efficiency is reduced a lot. Therefore, a method is necessary for saving the cost of the non-volatile program memory and not reducing the system efficiency at the same time.

Therefore, Applicant also disclosed in the present invention, page 3, lines 8-11:

[t]he objective of the present invention is to provide a data processing system, in which the microprocessor *doesn't need an external non-volatile program memory* in order to save the cost of the external non-volatile program memory and not reduce the system efficiency. (emphasis added).

The present invention uses the permanent memory to store the application program and, thus, omits the external non-volatile program memory popularly employed in prior arts to save the cost. As to mitigate the potential side effect of the accompanying reduction of system efficiency, the present invention provides a solution that a small non-volatile program memory, e.g. "about 1K bytes," is built-in within the microprocessor for storing a startup program. In this configuration, the

cost of a large external non-volatile program memory is saved while the system efficiency is not jeopardized (Page 7, lines 19-20).

In contrast, Masuda discloses none of the aforementioned problem, the objective or the corresponding solution as recited in claim 1 of the present invention. The benefit associated with claim 1 of the present invention cannot reasonably be expected in Masuda. Specifically, in FIG. 1, it is clear that Masuda's ROM is a traditionally *external* non-volatile memory, which directly contradicts with the recited *built-in* non-volatile program memory in claim 1 of the present invention. It is therefore believed that claim 1 of the present invention is substantially different from Masuda's disclosure. Accordingly, Applicant asserts that Masuda does not anticipate claim 1 and respectfully requests withdrawal of the rejection.

It is axiomatic in U.S. patent law that, in order for a reference to anticipate a claimed structure, it must clearly disclose each and every feature of the claimed structure. Applicant submits that it is abundantly clear, as discussed above, that Masuda does not disclose each and every feature of Applicant's claims and, therefore, could not possibly anticipate these claims under 35 U.S.C. § 102. Absent a specific showing of these features, Masuda cannot be said to anticipate any of Applicant's claims under 35 U.S.C. § 102.

35 U.S.C. § 103(a) Rejections

Applicant submits that the dependent claims 2-16 not specifically addressed herein are allowable for the reasons discussed in pertinent portions associated with their independent claim 1, as well as for their own additional features. Accordingly, Applicant asserts that the cited prior arts neither anticipate nor make obvious claims 2-16 and respectfully requests withdrawal of the rejections. Reconsideration of claims 2-16 is respectfully requested.

Neither Masuda, Kiuchi et al., Ise et al., Kakihara, Mozer et al., Smith, Wei et al., nor Applicant's Admitted Prior Art disclose, or suggest a modification of their specifically disclosed structures that would lead one having ordinary skill in the art to arrive at Applicant's claimed structure. Applicant hereby respectfully submits that no combination of the cited prior art renders obvious Applicant's claims.

Summary

In view of the foregoing amendments and remarks, Applicant submits that this application is now in condition for allowance and such action is respectfully requested. Should any points remain in issue, which the Examiner feels could best be resolved by either a personal or a telephone interview, it is urged that Applicant's local attorney be contacted at the exchange listed below.

Respectfully submitted,

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